

HP OpenView

Storage Mirroring application notes

Failing over NFS shares

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Storage Mirroring Failing over NFS shares application notes

Document overview

This document is a Storage Mirroring application note. An application note provides guidelines on the use of Storage Mirroring in a specific environment.

This document contains:

- **Document overview**—Explains what an application note contains, how it should be used, what you need to know before trying to use the application note, and where you can go for more information.
- **Solution overview**—Explains how the applications work with Storage Mirroring and describes the considerations that you must weigh when implementing your Storage Mirroring solution. Review this section to make sure that you understand the theory involved with using Storage Mirroring and your application. Includes both basics, such as system requirements, as well as configuration and environment-specific topics, such as interactions with specific clients or special considerations for WAN (Wide Area Network) environments. Pay special attention to those topics that are directly related to your environment.
- **Sample implementations**—Describes specific examples of how to use Storage Mirroring for this solution. Use these procedures as a guideline for creating your own implementation. Because no two environments or configurations are exactly the same, you will probably need to implement additional or different steps than what is documented here in order to make the solution work in your environment.

Audience

This document is written for network and application administrators who have a working understanding of the applications and environments where the Storage Mirroring solution is to be deployed. You may need to expand on the documented information in order to customize the solution to fit your environment.

Before you use this application note, you should have an understanding of:

- Storage Mirroring
- Network File System (NFS) shares

Expectations

Application notes are intended to provide a framework for configuring a Storage Mirroring solution in a specific environment and to draw attention to decisions you will need to make when configuring your solution.

Because there are an infinite number of possible configuration, network, and environment scenarios, application notes contain general configuration guidelines as well as an example configuration procedure that has been tested for a specific environment.

This document assumes that you are comfortable working with your operating system, Storage Mirroring, and the application(s) being used with Storage Mirroring.

Related documentation

Before you begin to configure your solution, make sure that you have complete documentation for your operating system, application(s), and Storage Mirroring. This application note does not provide step-by-step instructions for using standard operating system, application, and Storage Mirroring functionality.

The following documents contain additional information that you may need while setting up this solution:

- *HP OpenView Storage Mirroring user guide* or online documentation
- Reference guides or documentation for NFS shares

Getting help

Hewlett-Packard has application notes that describe how to configure Storage Mirroring with a variety of popular third-party applications. These application notes are available on the Storage Mirroring web site: <http://h18006.www1.hp.com/products/storage/software/sm/index.html>.

For help using Storage Mirroring, refer to the Storage Mirroring online manual or online help.

Solution overview

Failover is a component of Storage Mirroring that allows a target to stand in for a failed source machine. The failover target assumes the network identity of the failed source. When the target assumes the identity of the source, user and application requests destined for the source machine or its IP address(es) are routed to the target. Also during failover, the target can assume or add any source shares so that they remain accessible to the end users. A share is any volume, drive, or directory resource that is shared across a network.

Share configuration and failover occurs automatically for Windows shares. Other shares, such as NFS shares, must be configured for failover through the failover scripts. This document covers the scripting necessary to failover NFS shares. For complete details on configuring failover, see the Storage Mirroring user's guide.

Modifying the sample script files

After you modify the sample scripts, save them with a new name to remove the `SAMPLE_` prefix. Copy the scripts to the directory where Storage Mirroring is installed.

The sample batch files provided are only examples. Because no two environments or configurations are exactly the same, you **MUST** modify the sample scripts in order to make the solution work in your environment.

Chngname utility

You will also need the file `chngname.exe` to complete these instructions. This file is available in the Tools directory when you download the product from the following web site:

<http://www.openview.hp.com/downloads/downloads.html>.

Sample Implementation

This section describes an example of how to configure Storage Mirroring and NFS shares. Use these procedures as a guideline for creating your own implementation.

Because no two environments or configurations are exactly the same, you will probably need to implement additional or different steps than what is documented here in order to make the solution work in your environment.

NFS share failover

1. On the target, stop the NFS service, if it is running.
2. Set the NFS service to manual startup. This allows the Storage Mirroring post-failover script on the target to control when the service starts on the target.
3. Create each shared drive or directory on the target exactly as it exists on the source. Configure each drive or directory as an NFS share by following these steps.
 - a. Right-click the drive or directory that you want to share and select **Sharing**.
 - b. Click the **NFS Sharing** tab on the Program Files Properties dialog box.
 - c. Enable **Share this folder**, provide the name of the share, and click **OK** to share the folder as an NFS share.
4. On the target, copy the `chngname` utility, `chngname.exe`, from the `\tools\Win2K` or `\tools\NT` directory from the web download to the directory where Storage Mirroring is installed.

5. If a failure occurs, you will want to automate the starting of the NFS service. To do this, create a batch file called `postover.bat` using the sample batch file below. Save the batch file to the same directory where your Storage Mirroring files are installed.

SAMPLE_Postoverbat .

```
rem Additional commands for NFS share failover

rem The chngname utility (chngname.exe) must be located in the same directory where Storage Mirroring
is installed.

rem The following command temporarily changes the name of the server. You will need to replace
<drive>:\<directory>\
rem with the location of your Storage Mirroring chngname utility and replace source_name with the name
of the source
rem machine.
<drive>\<directory>\chngname /s source_name

rem The following command starts the NFS service
net start "Server for NFS"
```

6. When configuring failover, specify the script the `postover.bat` just created for the target post-failover script.

NOTE: The scripts are processed using the same account running the Storage Mirroring service.

